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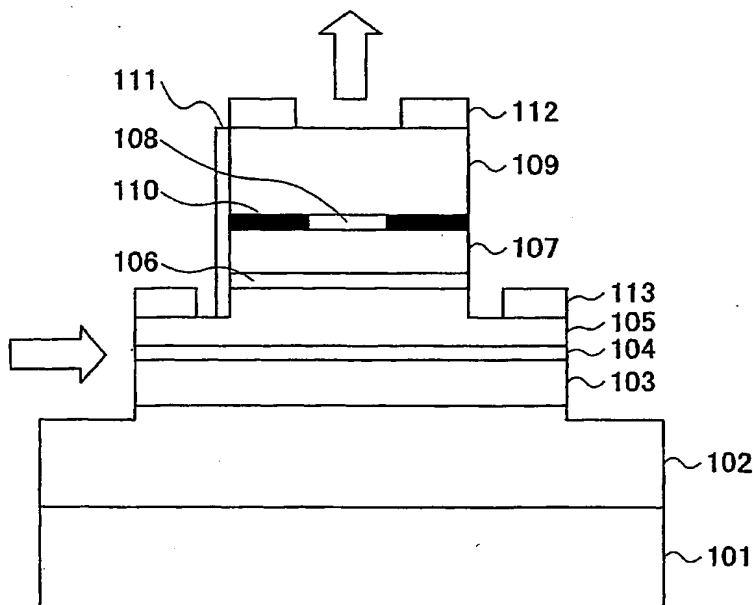
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[Continued on next page]

**(54) Title:** VERTICAL CAVITY SURFACE EMITTING SEMICONDUCTOR LASER, LIGHT EMISSION DEVICE, AND OPTICAL TRANSMISSION SYSTEM



(57) **Abstract:** A semiconductor laser is disclosed with which a VCSEL can be constituted with a simplified configuration for optical transmission at a transmission rate higher than 10 Gbps. The semiconductor laser includes a resonator including a first active region able to emit light in response to current injection and a second active region able to emit light in response to external excitation light. Multilayer film reflecting mirrors sandwich the resonator from two opposite sides. The first active region and the second active region generate light at a wavelength the same as the resonance mode of the resonator.

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